

## REMARKS

Claims 1, 4-8, 11-14, 17-21, 24-59, 62-66, 69-72, 75-79, 82-84, 88-90, 113-114, and 143-178 are pending.

### I. The allowable subject matter.

Applicants respectfully thank the Examiner for indicating the allowable subject matter. On page 10 of the Office Action, the USPTO respectfully indicates that claims 29, 31-45, and 50-53 would be allowable if rewritten in independent form including all of the limitations of the base claims. Applicants respectfully accept the indicated allowable subject matter as noted in the following table, which summarizes the claim amendments:

Amended/New claim number	Previous claim(s) on which amended/new claim is based
1	1 + 11 + 38
59	59 + 11 + 38
72	72 + 11 + 38
161	14 + 27 + 28 + 29
162	40
163	32
164	33
165	34
166	42
167	43
168	14 + 27 + 30 + 31
169	41
170	35
171	36
172	37
173	44
174	45

Amended/New claim number (cont.)	Previous claim(s) on which amended/new claim is based (cont.)
175	14 + 46 + 49 + 50
176	51
177	52
178	53

Applicants respectfully assert that the indicated amendments and new claims can be entered after final rejection pursuant to 37 C.F.R. 1.116 because the amendments merely copy the limitations of previously examined claims into other claims. Therefore, no new search is required and the amendments can be entered.

II. The obviousness rejections based on Jackson in view of Heanue in view of Yamaguchi further in view of Rentzepis.

The USPTO respectfully rejects claims 1, 4, 8-14, 17, 21-28, 30, 45-47, 54-59, 62, 66-72, 75, 79-84, and 113-114 as obvious over Jackson in view of Heanue in view of Yamaguchi and further in view of Rentzepis. Of these claims, claims 1, 14, 59, and 72 are independent claims. As noted above, independent claims 1, 59, and 72 have been amended to include allowable subject matter. Therefore, it is respectfully asserted that claims 1, 59, 72, and their dependent claims are allowable.

A. The cited references do not teach or suggest generating a set of decryption keys by generating a set of intensity patterns of the combination of the reference beam and a phase shifted reference beam, as claimed in independent claim 14.

Applicants respectfully note that independent claim 14 has been amended to include the limitations of dependent claim 27. Thus, because claim 27 has already been examined, no new search is required and the amendment can be entered after final rejection.

Regarding the limitations of independent claim 14 that claim in relevant part:

“wherein the decrypting of the encrypted set of data comprises generating a set of decryption keys by generating a set of intensity patterns,  $I'_p$ , of the combination of the reference beam and a phase shifted reference beam.”

**(emphasis added)**

it is respectfully not seen where the cited references teach or suggest the claimed method step quoted above.

Regarding claim 27 on page 5 of the Office Action, the USPTO respectfully alleges that the modified Jackson, Heanue, Yamaguchi, and Rentzepis system discloses generating decryption keys, particularly noting columns 9 and 10 of Jackson. However, Jackson only appears to teach or suggest using decryption keys in broad, general terms, but it is not clear. Jackson does not appear to disclose generating a set of decryption keys by generating a set of intensity patterns of the combination of the reference beam and a phase shifted reference beam, as specifically claimed in claim 14 as quoted above. Furthermore, the other cited references do not appear to teach or suggest this specifically claimed limitation.

In contrast, pages 13 and 24 of the present specification illustrate one possible embodiment of the claimed limitations quoted above. Specifically, page 13 of the present specification, referring to present Figure 1, explains how reference beam 102aa and the object beam 102d interfere in-line at the output plane 130, and an intensity pattern is recorded by adjusting or shifting the phase of the reference beam 102a. Furthermore, page 24 of the present specification mathematically describes one example of an intensity pattern. Thus, an intensity pattern is generated from the combination of the reference beam and a phase shifted reference beam, as claimed in claim 1.

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach all the limitations of claim 14 as quoted above. Accordingly, as the Examiner is respectfully aware, MPEP 706.02(j) discusses the statutory and case law requirements for an obviousness rejection:

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947

F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." **(emphasis added)**

Therefore, it is respectfully asserted that a *prima facie* case of obviousness has not been established, and claim 14 is therefore allowable.

III. The obviousness rejections of the dependent claims.

In addition to the obviousness rejection indicated above, the Examiner respectfully makes other obviousness rejections of dependent claims, as noted on pages 5-9 of the Office Action. As noted above, it is respectfully asserted that independent claims 1, 14, 59, and 72 are allowable, and therefore it is further respectfully asserted that all dependent claims depending from these independent claims are also allowable.

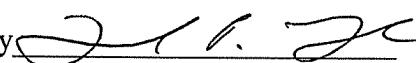
IV. Conclusion.

Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

By 

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